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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/079,026 | 02/19/2002 | Christopher R. Adams | 01-843 1496.00191 | 6416 |

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| EXAMINER | |
|---|---|
| KOSTAK, VICTOR R | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2614 | |

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/079,026 | ADAMS ET AL. | |
| | Examiner | Art Unit | |
| | Victor R. Kostak | 2614 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,8,10-12,14 and 19* is/are rejected.

7)☒ Claim(s) *4-7, 9, 13-16 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/19/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 10 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Takayama et al.

The television receiver of Takayama (noting Fig. 1) carries out a process of demodulating RF signals modulated by an analog television signal, wherein his system includes a tuner 1 having a first component 2 that generates an IF signal by frequency conversion (col. 4 lines 30-34); an A/D convertor 4 that generates a digital version of a secondly converted signal in a different IF band (col. 4 lines 34-42); and a following circuit 9 that demodulates the digital television signal from the IF band to generate a baseband signal (col. 5 lines 25-31), thereby meeting claims 1, 10 and 19.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 3, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al. in view of Mathe.

Takayama states that he uses QPSK demodulation, but does not give any details of the circuitry therefor, thereby implying that it would have been obvious to one of ordinary skill in

the art to incorporate any suitable well-known QPSK demodulator capable of carrying out demodulation of his processed television signal.

Mathe (noting particularly Figs. 2, 5 and 6) discloses a receiver (Fig. 2) capable of reproducing television signals (e.g. col. 5 line 49), and which incorporates a QPSK demodulator (Fig. 5) having translation circuitry (multipliers for applying sinusoidal waveforms) for generating digital baseband signals components I and Q (as shown), further including noise cancellation decimation filtering (elements 614a and 614b shown in Fig. 6).

It would have been obvious to one of ordinary skill in the art to use any suitable QPSK demodulator as implied by Takayama, as that of Mathe, for additionally providing noise reduction, which is a typical consideration in the field signal reproduction, thereby meeting claims 2 and 11.

As for claims 3 and 12, decimators 614a and 614b are filters, as shown.

3. Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al. in view of Taga et al.

As noted above, because Takayama does not give any details of the QPSK demodulation circuitry, he therefore implies that it would have been obvious to one of ordinary skill in the art to incorporate any suitable well-known QPSK demodulator capable of carrying out demodulation of his processed television signal.

Like Mathe, Taga also uses QPSK demodulation of television signals, and describes in some detail the components thereof (noting Figs. 3 and 9). Moreover, Taga discloses a phase detection/comparison stage 12 that generates an error signal sent to loop filter 31 in a feedback

arrangement, wherein a loop filter 34 associated with an NCO 22 that generates a sawtooth wave (col. 6 lines 67-68) looks up data from a ROM 71 that is part of frequency error detector 33, which in turn provides the NCO with its sinusoidal data.

It would have been obvious to one of ordinary skill in the art to use the demodulator of Taga in the receiver of Takayama leaves open the QPSK demodulator arrangement, for the benefit of maintaining proper phase and frequency, thereby generating an adequately reproduced demodulated television signal.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Claims 4-7, 9, 13-16 and 18 appear allowable over the prior art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is 703 305-4374. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

**Or faxed to:**

**(703) 872-9306 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.

Victor R. Kostak
Primary Examiner
Art Unit 2614

VRK